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CASES

TREATED BY FARADISATION.

BY

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LONDON:
TRÜBNER AND CO., 60, PATERNOSTER ROW.

M.DCCC.LXI.

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CASES

TREATED BY FARADISATION.

The following cases, which have been treated by Faradisation, and some of which have already appeared in the *Medical Times and Gazette*, seemed to be of sufficient interest to justify their publication in a special form, as they illustrate a mode of treating disease which, although of great and lasting benefit in certain cases, has hitherto not been so generally adopted as the results obtained by it seem to warrant.

1. *Case of Neuralgia, Anæsthesia, Loss of Power and the Sense of Touch.*

This case was chiefly remarkable for its cause and rapid cure. The patient was a merchant, aged 30, of vigorous constitution, and active habits. He was a passenger by the Canadian steamer, which foundered at sea on the 4th of June last, about 200 miles off the coast of Canada. Many of the passengers were drowned; but this gentleman, by means of a life-buoy, was enabled to float until, three quarters of an hour afterwards, he was picked up by a boat which was passing. Life was then almost extinct. The water was at the time very little above freezing point, as large masses of ice were floating in it. The patient, however, soon rallied; but unfortunately he had to remain in his wet clothes for a consider-

able time; and even when he landed he could not at once obtain a change of dress. He did not at first experience any ill effects from this accident; but after some time he began to feel severe burning pain in the arms and legs; and when the pain subsided, he perceived numbness in the limbs and loss of muscular power. He soon afterwards returned to England, and was, during his passage, subjected to treatment by the ship-surgeon, who prescribed anodyne applications, as opium, aconite, etc. to the arms, and general tonics; but he derived no benefit whatever from the remedies used. On his arrival in this country, he consulted Mr. Snape, of Bolton-le-Moors, in Lancashire, who gave his opinion, that Faradisation would be the best means of restoring him, and accordingly sent him to me. On examination, I found the following morbid symptoms:—1st as regards the sentient nerves: there was a burning neuralgic pain, especially in the fore-arms and thighs, which very much increased towards evening and in the night; so that the patient was prevented from sleeping, and in consequence became much exhausted in the morning. There was also considerable anaesthesia, especially in the right hand and fore-arm, where the prick of a pin could not be felt at all; while on other parts it was only obtusely felt, and not as a prick, but as a mere touch. The sense of touch, especially in the right hand, was also much diminished. Finally there was a semi-paralytic condition of the arms; the patient could move them, but he had no power over the muscles; he could not grasp anything with force, and experienced great difficulty in writing. The contractility of the muscles was not diminished, as they answered readily to an electric current of moderate power, only the influence of volition over them had considerably decreased. The flexor muscles of the fore-arm were most affected. The general health of the patient was good, notwithstanding the loss of rest, and the wear and tear consequent upon great suffering.

After having examined the patient, I quite agreed with Mr. Snape as to the advisability of resorting to Faradisation,

and applied a rapidly-interrupted current of the first order of three centimètres power of my apparatus, to the skin for relieving the neuralgic pain and the anaesthesia; and an extra-current of four centimètres to the weakened muscles, in order to restore their power. The following were the effects of this treatment:—The pain, which was very severe at the time the patient came to me, disappeared during the first application; and he slept soundly the following night. The pain returned in the morning, although in a lesser degree; and after a few more applications, in which I modified the intensity of the current and the duration of the operation according to the necessities of the case, it was entirely subdued. The anaesthesia also yielded rapidly to the means employed. After three operations, the patient was again able to feel distinctly, not only the prick of a pin, wherever I applied it, but also the mere touch of blunt instruments; and when he left town, after having been under my care for six days, he was quite free from pain, the anaesthesia was gone, the sense of touch was again normal, and the muscular power had returned. I have not seen him since; but Mr. Snape has kindly written (Nov. 12) to say, that the effects of the treatment have been permanent, and that the patient returned to Canada some time ago, in perfect health.

2. *Case of Loss of Voice.*

A nurse-maid, aged 21, came under the care of Dr. Savage, at the Samaritan Free Hospital, in February 1858, having lost her voice a month before. There were no signs of inflammation or of ulceration of the mucous membrane of the larynx, but the affection consisted of loss of power in the recurrent nerve, and the muscles animated by it. No medicine was given, as Dr. Savage was anxious to see the effects of Faradisation in such cases. I directed the Faradic stimulus to the terminal branches of the recurrent

nerve, with the result, that after the first operation, the normal sound of the voice sometimes returned in the course of whispering; after the second application, the improvement was very striking, and two more were sufficient to completely restore the voice. French Physicians have, in such cases, directed the poles to the tongue, the neck, and the face; with beneficial result to the voice, but producing severe headache by the application; while Faradisation of the recurrent nerve is devoid of any such inconvenience.

3. *Case of Paralysis from Apoplexy.*

Jane S., a cook, aged 35, was under the care of Dr. Alderson, in St. Mary's Hospital, in July 1857. She had had an apoplectic attack fifteen months before, in which she lost her consciousness, and the use of the left arm and leg. The latter soon regained some power; but the deltoid muscle, the extensor of the forefinger and all the muscles of the thumb were still paralysed when I first saw her; they were quite flaccid, and their bulk had considerably diminished. She was not able to wash, cook, or do needle-work. When I directed an extra-current of five centimètres' power to the paralysed muscles, they showed very little excitability. After five operations, the deltoid muscle was very much improved, so that the patient could again raise the arm to a right angle with the body; but the muscles of the forefinger and the thumb required a longer treatment. I attended the patient for about a month, after which she left the hospital, being again able to return to her business.

4. *Case of Loss of Power, Neuralgia and Amenorrhœa.*

Mrs. D., aged 42, pricked the forefinger of her left hand with a needle. This induced considerable pain, of which she did not at first take much notice; but as the finger soon

became much inflamed, she applied for medical advice. Notwithstanding the treatment she underwent, the inflammation increased, gangrene ensued, and at last amputation of the finger became necessary. This operation was performed by Mr. Spencer Wells, on the 23d of December, 1858. Three months elapsed before the stump was healed, as at first the pus was of a very bad character; and the secretion only improved after repeated cauterisation with nitrate of silver. When the cicatrix had at last been formed, it appeared that the patient had entirely lost the use of her hand, and she was then sent to me by Mr. Spencer Wells. When I first saw her, the fingers were extended and quite stiff; flexion and lateral movements were impossible. The forearm could only with difficulty be bent, and every movement of it was painful. Numbness was felt in all the fingers, and pain in the elbow was complained of. The stump, which had a livid colour, was extremely sensitive, and at the slightest touch of it the patient almost fainted. Besides this, she showed that peculiar symptom which is by no means rare in persons who have undergone an amputation: that is, she felt pain in the removed part, which increased towards evening. Otherwise she was in fair health, with the exception, however, that she had three years before, after a difficult labour, lost the catamenia, and, in consequence of this, she suffered from headache for a few days every month. I directed a current of the first order of four centimètres power to the left arm, the positive pole being alternately applied to the trunks of the median and ulnar nerves. Direct Faradisation of the muscles, and more especially of the interossei and lumbricales, was also performed. Immediately after the first operation, the patient was again able to bend the second and third phalanges of the fingers; and after three more applications, she was no longer troubled with pain in the removed finger. After the ninth operation, the catamenia reappeared. The restoration of the mobility of the first phalanges of the fingers required a somewhat longer treatment, as in them the affection was very obstinate; but after

some weeks this was also attained. At the same time the stump had assumed a much healthier colour; it was also firmer, and not so sensitive to touch as before. The catamenia continued afterwards at regular intervals.

5. *Case of Wry-neck and Dysmenorrhoea.*

On the 21st of November, 1859, I was consulted by a lady, aged 34, who had for about eighteen months suffered from spasmodic contractions of the left trapezius and cleidomastoid muscles. She observed the first symptoms after a violent emotion, caused by witnessing an accident in the street. At first the contractions were slight, and only occurred if the patient was excited, when in society, or suddenly spoken to. The affection gradually increased and became more troublesome. When she carried the fork or spoon to the mouth, the head at once turned away; at the same time a feeling of numbness, stiffness and fatigue was observed in the left side of the neck; but there was no pain, unless the contractions were unusually violent. She was at first treated by blisters to the neck, and purgatives, but she did not experience any benefit from them. At a later period of her illness, she consulted the late Dr. Todd, who prescribed the valerianate of zinc, in two-grain doses, twice a day; and she thought she had observed a slight improvement after it; but as, after having taken it regularly for two months, she was still a severe sufferer from her complaint, by the advice of Dr. Todd she came to me for Faradisation.

On making an examination of the muscles of the neck, I found the left trapezius and cleidomastoid somewhat rigid. The corresponding muscles on the right side did not show any signs of atrophy, but on applying the Faradic current to the two sets, the excitability of the fibres appeared greater on the left than on the right side; and the sensation excited by the application of the current was also more considerable on the left side. While I was examining the muscles, violent

spasms occurred in those affected ; the head was convulsively thrown towards the left side, and all the patient's endeavours to keep it straight were of no avail; but by Faradisation of the antagonistic muscles, I at once succeeded in restoring the equilibrium between the two sets, and calming the spasms. I afterwards practised Faradisation of the skin, which I had previously found to be of great benefit in hysterical convulsions. The influence of emotion in exciting the spasms was most striking in this case. The patient suffered far less when she was alone, and if the room was darkened; but if she thought herself observed and the object of wonder or pity, she became much worse. She had, therefore, almost retired from society, and was only with difficulty induced to leave her rooms, from which she used to shut out the light. As eating was troublesome, she took as little food as possible, and, in consequence of this, and the melancholic turn of mind caused by her affection, her general health had become impaired, and the catamenia were very scanty. Faradisation was continued for three days, when the catamenia appeared before the time, and unusually abundant, so that the treatment had to be discontinued for a week. After that it was recommenced, and in a month's time the equilibrium between the two sets of muscles was so entirely re-established, that not a trace of the spasms was observed, even when the patient was excited in any way. The general health also improved in consequence of the changed mode of life now adopted by the patient, and the catamenia again became normal.

6. *Case of Loss of Power and Neuralgia of the Fore-arm after Fracture.*

M. W., a married woman, aged 46, suffered a fracture of the lower end of the radius of the right arm, in consequence of a fall. She became an out-patient at the Middlesex Hospital, where a bandage was applied ; but by the carelessness of the patient, this unfortunately got out of order, and the

bone healed crookedly in consequence. It was then again fractured by a surgeon, and put straight; but the cure was now protracted over ten months; and when the bone was at last healed, the arm remained painful and entirely useless. She became, some time afterwards, an out-patient at the Samaritan Free Hospital, and was sent to me by Dr. Henry G. Wright. Faradisation of the median and ulnar nerves was twice performed, when the pain was entirely gone, and the arm could be used as before.

7. *Case of Facial Paralysis.*

Mr. F., a barrister, aged 35, was, in consequence of having been exposed to a draught of cold air at a railway station, affected with paralysis of the left facial nerve. The physiognomical expression had entirely vanished from that side of the face. The patient was not able to laugh, to frown, to whistle, or to shut his eye, which latter appeared staring and protruded. The angle of the mouth was depressed, and drawn towards the opposite side; that of the sound side being higher and drawn towards the ear. The cheek was flaccid and loose; and eating and speaking was troublesome. The patient was sent to me by the late Dr. Todd, whom he had consulted six months after the commencement of the affection. I directed the Faradic stimulus to all the paralysed muscles individually, with the effect that the patient regained his normal physiognomical expression, after a fortnight's treatment.

8. *Case of Numbness and Loss of Power in the right Leg.*

Count Z., aged 63, had, about twenty years ago, suffered from a rupture of the capsular ligament of the hip-joint in consequence of an accident, and had never quite recovered from the effects of it. He complained of great numbness and stiffness in the right leg, the muscles of which were not nearly so well developed as those of the left, so that

he had much difficulty in walking. Sir James Clark, whom he had consulted in June, 1857, believed that Faradisation would be the best means to restore him, and sent him to me. The patient was very considerably improved by a short treatment, but as he left town soon afterwards, the cure was not complete.

9. *Case of Rheumatism in the Shoulder.*

Dr. T., aged 47, had been a sufferer from rheumatism in the left shoulder for more than seven years, when he came under my treatment (1857). He had tried almost every means for the relief of the pain, which, especially in autumn and winter became very troublesome ; he had also used galvanism, but without any beneficial effect, and wished to try Faradisation as a "dernier ressort." After two operations, the pain disappeared, and has not since returned.

10. *Case of Paralysis from Apoplexy.*

R. V., Esq., aged 57, of originally vigorous and plethoric constitution, but now somewhat debilitated by an antiphlogistic treatment, had been in fair health, until six months before I saw him, when he had an apoplectic attack, accompanied with loss of consciousness for three hours, and paralysis of the right side of the face, the tongue, the right arm and leg. The face regained its normal appearance three months after the attack, and the muscles of the arm also improved; he wrote, however, only with a trembling hand, and could not well manage to hold the spoon, fork, and knife; but he chiefly complained of great difficulty in walking. His judgment and memory were not disturbed, and there was no pain in the head nor the limbs ; the speech was likewise no longer impeded. The skin of the right arm and leg was cold and flaccid, and the pulse weaker in the right than in the left side. There was a feeling of numbness in the

right arm and leg, where the prick of a pin was only indistinctly felt. The muscles at the same side were relaxed and diminished in bulk, especially the extensors; there was no rigidity either in the lower or in the upper extremity. This state of the muscles, together with the fact that six months had elapsed since the attack, justified my opinion that intracranial irritation no longer existed, that the cicatrix had been formed, and that the seat of the paralysis was no longer in the injured brain but in the muscles, impaired by their long disuse. In such cases Faradisation is almost always useful, and I therefore resorted to this treatment. After sixteen operations, the bulk of the muscles was increased, the circulation was reintegrated, and writing as well as walking had become much easier than it was before.

11. *Case of Neuralgia, Loss of Power in the Arm, and loss of Voice.*

M. K., aged 40, a needlewoman of feeble constitution, had for a long time suffered from neuralgia in the right arm, and also from loss of power in the muscles, so that she was entirely unable to work. She became an out-patient at the Samaritan Free Hospital, under the care of Dr. Henry G. Wright, who sent her to me. After four operations, in which I directed an extra-current of five centimètres to the weakened muscles, and a current of the first order of four centimètres to the skin for relieving the neuralgia, she was greatly improved; but when she came to me the next time, she had, in consequence of having got wet through, entirely lost her voice. I thereupon directed the Faradic stimulus to the recurrent nerve, with the effect that the voice returned at once. By further treatment, the neuralgia and loss of power were entirely cured.

12. *Case of Lumbago.*

This patient, a gentleman aged 42, was sent to me by Dr. Protheroe Smith. He suffered from the usual symptoms

of lumbago. Faradisation of the skin of the back and the side relieved the pain in a very short time.

13. *Case of Wry-neck.*

On the 6th of May last, I was consulted by a brewer from Hampshire, aged 40, a strong healthy man, who, with the exception of what he described as bilious head-ache, from which he now and then suffered, had never been ill before the present affection came on. In February last, he first noticed that his head was inclined to fall towards the left side. He was unable to assign any exact cause, but mentioned that shortly before he first fell ill, while driving, his horse fell and broke his neck, which gave him a great shock. He had also had much anxiety lately, and admitted having slept on a damp couch shortly before being attacked by the spasms. The latter affected the left side of the neck, and gradually became so much worse that he was constantly obliged to hold his head in the right position with the left hand, so that the latter became in a measure useless. He was no longer able to dress himself. His food was obliged to be cut for him, as he could not hold the knife and fork. He was also troubled at night, for if he attempted to sleep on the side as he had been accustomed to do, his head began to tremble, so that he was obliged to lie straight on his back. He could then sleep well, and generally felt better in the morning than at other times of the day. The treatment at home consisted of laudanum, calomel, blisters, leeches, and cupping; but it had no beneficial effect whatever. He then came up to town to consult Dr. Lichtenberg, of Finsbury-place, who prescribed a veratrine ointment to be applied to the nape of the neck, and sent him to me that the suffering part might be subjected to Faradisation.

On examining the neck, the left trapeziuis and cleido-mastoid were found more strongly developed than the

corresponding muscles of the right side which were soft and flabby. After the first operation, the patient felt easier, and could hold his head straight for a short time without being obliged to support it with the hand. The improvement was so rapid that, after a few other applications, the patient could feed and dress himself without aid. He could again sleep on the side, without being disturbed by trembling of the head. I was therefore hopeful of a perfect cure; but the patient, being anxious about his business, felt so unhappy in London, that he left town before he was quite cured, after having stayed here less than a week.

14. *Case of Deafness.*

This patient, who is still under treatment, is a married woman, aged 37, mother of three children, of a very delicate constitution and a disposition to consumption. The beginning of her deafness dates as far back as 1849, and the only cause she can assign for it is cold. There has never been any inflammation of, nor discharge from, the ear. She has been treated for a long time at St. Thomas's Hospital, but without any benefit. Dr. Wright, who had previously seen good results of Faradisation at my hands in cases of deafness, sent the patient to me. I could not discover any signs of disease in the temporal bone, in the Eustachian tube, or in the membrana tympani; and it is just such cases of deafness, which are of very frequent occurrence, in which Faradisation generally produces excellent results. The patient was placed in a recumbent position, the external opening of the ear was filled with warm water, and a moistened conductor connected with the positive pole was applied to the nape of the neck, while the negative pole was made to touch the water in the meatus. If the operation is performed in this manner, the whole extent of the membrana tympani is brought under the influence of Faradisation. I applied an extra-current of one centimètre power. Considering the long duration of the affection, the

result of the treatment was very remarkable. The patient who, when she came to me, did not notice any questions I addressed to her, nor heard any sounds produced, heard, on leaving my house, after the first application, a dog bark; and on turning into Oxford-street, she heard the whistle of an omnibus conductor. Since then she has steadily improved, so that it is now (Nov. 15.) easy to converse with her, although she is not yet quite cured. At the same time the catamenia, which were very scanty, have become more abundant and of a better character.

In conclusion, I will remark, that in treating disease by means of Faradisation, it is of the utmost importance that the dose of the remedy should be suitable to a given case; as by an improper selection of current the effect produced may be contrary to that which is desired. Every one is agreed, that the action of ten drops of laudanum in the system is different from that of a hundred, and that different doses have to be given if it is intended to procure by this remedy sleep, or cessation of pain, or to stop diarrhœa, etc. The same applies, even in a higher degree, to the Faradic stimulus, to which every organ has a different sensibility; besides which there are variations according to age, sex and constitution, which must be carefully attended to.

In the course of varied experience, I have found, that the action of Faradisation is generally confined to the part which is brought under its direct influence; but there are two remote effects produced by it in certain cases, independently of the part of the body to which it has been applied, and of the nature of the affection for which it was used. These are, first, an emmenagogue effect in women, and secondly, sleep is induced in persons affected with insomnia. Cases of amenorrhœa, dysmenorrhœa, and sleeplessness, may, therefore, by this means be cured.

It has sometimes been objected to Faradisation that its

results were only temporary; and Sir Henry Holland lately remarked, that its therapeutical value would be greatly increased if it could be shown that the curative effects obtained by it were permanent. My experience, as well as that of some continental physicians, goes far to prove that relapses after Faradisation are very rare, and generally only occur in such patients as were unable to continue the treatment until a perfect cure was brought about. Amongst many cases in my practice, in which the cure has been permanent, I will only mention two treated by me four and three years ago: one of rheumatism of the shoulder, which, although it had lasted seven years, yielded to two applications (Case 9); and another of severe sciatica of three years' standing, in a gentleman who was sent to me by Sir James Clark, and whose case I have described in my "Treatise on Medical Electricity;" in neither of which has there been any return of the affection.

18, Bryanston-street, Portman Square,
November 1861.